

Notice of Allowability

Application No.

10/694,144

Examiner

Joni Hsu

Applicant(s)

ESTROP, STEPHEN J.

Art Unit

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to papers received February 2, 2006.
2. ☒ The allowed claim(s) is/are 1-3, 5-13, 15-20 and 23-35.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 2/2/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on February 2, 2006 was filed after the mailing date of the application on October 27, 2003. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Response to Amendment

2. Applicant's arguments, see pages 16-23, filed February 2, 2006, with respect to Claims 1-3, 5-13, 15-20, and 23-35 have been fully considered and are persuasive. The 35 U.S.C. 103(a) rejections of Claims 1-3, 5-13, 15-20, and 23-35 has been withdrawn.

Allowable Subject Matter

3. Claims 1-3, 5-13, 15-20, and 23-35 are allowed.

The following is an examiner's statement of reasons for allowance:

4. The prior art taken singly or in combination do not teach or suggest a method for processing video data in an apparatus including a computer processing module and a graphics processing module with a 3D graphics pipeline, comprising receiving a principal video stream from a source via plural inputs associated with respective components of the principal video stream to the graphics processing module; receiving a video sub-stream via another input to the

graphical processing module; in a single stage operation that requires on a single read transaction to perform, performing, by the graphics processing module, an operation on the principal video stream and combining the principal video stream with the video sub-stream; wherein each of the plural inputs for receiving the principal video stream and the other input for receiving the video sub-stream refer to separate inputs, as recited in Claims 1, 11, and 25-28. Claims 2, 3, 5-10, 12, 13, 15-20, 23-24, and 29-35 depend from these claims, and therefore also contain allowable subject matter.

5. The closest prior art (Salmonsens US 20040054689A1) teaches a method for processing video data in an apparatus including a computer processing module (214, Figure 2) [0033], comprising receiving a principal video stream from a source [0104]; receiving a video sub-stream containing supplemental information associated with the principal video stream [0137]; performing an operation on the principal video stream [0104] and combining the principal video stream with the video sub-stream to produce processed data; and outputting the processed data [0181]. However, Salmonsens does not teach that the performing and the combining are performed in a single stage operation, wherein the single stage operation requires only a single read transaction to perform the single stage operation.

6. Another prior art (Uehara US006611269B1) teaches that arithmetic unit A (1062, Figure 1) performs an operation on the principal video stream (*implements video up/down scaling processes*) (Col. 4, lines 20-28; Col. 8, lines 36-37, 49-56) and arithmetic unit B (1063) combines the principal video stream with the video sub-stream to produce processed data

(*blending process with the on-screen display*) (Col. 4, lines 20-28; Col. 8, lines 39-40, 56-61).

The performing (1062) and the combining (1063) are performed in parallel (Col. 5, lines 62-67), and therefore are performed in a single stage operation, wherein the single stage operation requires only a single read transaction to perform the single stage operation (Col. 8, lines 12-22). However, Uehara does not teach a graphics processing module for receiving a principal video stream and a video sub-stream on separate inputs.

7. Another prior art (Herrara US006208350B1) teaches performing an operation on the principal video stream and combining the principal video stream with the video sub-stream to produce processed data (14, Figure 1; *sub-picture(s) are intended to be blended with the video for a true translucent overlay in the final digital video signal, video stream is decoded*, Col. 2, line 39-Col. 3, line 19), and that the graphics processing module executes video processing tasks using a 3D graphics pipeline (Col. 10, lines 44-49). However, Herrara does not teach a graphics processing module for receiving a principal video stream and a video sub-stream on separate inputs.

8. Another prior art (Lillig US 20040032906A1) teaches receiving the principal video stream from a source via plural inputs (306, 307, 308, Figure 3) to the graphics processing module (310, 330, 345), the plural inputs associated with respective components of the principal video stream [0065], receiving the video sub-stream (Y,U,V) via another input to the graphics processing module (310), as shown in Figure 3; wherein each of the plural inputs for receiving the principal video stream and the other input for receiving the video sub-stream refer to separate

inputs [0065] (Figure 3). However, Lillig does not teach that the performing and the combining are performed in a single stage operation, wherein the single stage operation requires only a single read transaction to perform the single stage operation.

9. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Prior Art of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Salmonsens (US 20040054689A1) teaches an emulator 800 that can generate a plurality of subpicture streams that overlay video for captions and sub-titles [0137].
2. Uehara (US006611269B1) teaches a video display unit that implements video up/down scaling processes as well as blending process with the OSD (Col. 4, lines 20-28).
3. Herrera (US006208350B1) teaches blending sub-pictures with the video for a true translucent overlay in the final digital signal (Col. 2, lines 47-50).
4. Lillig (US 20040032906A1) teaches methods of segmenting foreground objects in digital video [0012].


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joni Hsu whose telephone number is 571-272-7785. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JH



Kee M. Tung
Primary Examiner